

WHAT IS CLAIMED IS:

- 1 1. A method of identifying potential risk, the risk due to potential
2 disruptions in material supply to a manufacturing facility, the method comprising:
3 identifying a component for an assembled product, the component being
4 purchased from a supplier, wherein identifying the component includes
5 identifying the supplier and a manufacturer's part number of the
6 component; and
7 storing an identity of the component.
- 1 2. A method of identifying potential risk, the risk due to potential
2 disruptions in material supply to a manufacturing facility, the method comprising:
3 determining a set of components for an assembled product;
4 storing the set of components;
5 determining a set of sub-components for the set of components;
6 storing the set of sub-components; and
7 combining the set of components and the set of sub-components.
- 1 3. The method as recited in claim 2, further comprising:
2 storing a country of origin of the set of components.
- 1 4. The method as recited in claim 2, further comprising:
2 storing an indicia of the geopolitical risk associated with the country of origin
3 of the set of components.
- 1 5. The method as recited in claim 2, further comprising:
2 storing an identity of a supplier of the set of components.
- 1 6. The method as recited in claim 2, further comprising:
2 storing an identity of an assembler of the set of components.

- 1 7. The method as recited in claim 2, further comprising:
2 determining a product assembled by a manufacturer, the product including the
3 set of components.
- 1 8. The method as recited in claim 2, further comprising:
2 determining an end-of-life date of the set of components.
- 1 9. The method as recited in claim 8, further comprising:
2 identifying components at-risk from the set of components due to a capital
3 cycle risk of the set of components.
- 1 10. The method as recited in claim 2, further comprising:
2 storing the identity of a fabricator of the set of components, wherein the
3 identity of the fabricator includes the name of the foundry.
- 1 11. The method as recited in claim 2, further comprising:
2 determining which components from the set of components are implicated
3 based upon an identified geopolitical risk.
- 1 12. The method as recited in claim 2, further comprising:
2 determining which components from the set of components are implicated
3 based upon an identified innovation risk.
- 1 13. The method as recited in claim 2, further comprising:
2 determining which components from the set of components are implicated
3 based upon an identified risk due to a supplier concentration.
- 1 14. The method as recited in claim 2, further comprising:
2 identifying components within a fixed period of an end-of-life date.
- 1 15. The method as recited in claim 2, further comprising:
2 forecasting future requirements of a component.

1 16. The method as recited in claim 15, further comprising:
2 forecasting future shortages of the components.

1 17. A method of determining a benchmark cost for a component across a
2 plurality of commodities, comprising:
3 determining a material cost;
4 determining a cost of labor to assemble a component;
5 determining cost of labor to test a component;
6 determining a profit;
7 determining an overhead cost;
8 determining a freight cost;
9 determining a warranty cost; and
10 benchmarking the components across the plurality of commodities based upon
11 the aforementioned steps.

1 18. The method as recited in claim 17, further comprising;
2 determining a cost to operate a supplier logistic hub;
3 adding the material cost, the cost of labor to assemble a component, the cost of
4 labor to test a component, the profit, the overhead cost, the freight cost,
5 the warranty cost and the cost to operate a supplier logistic hub; and
6 benchmarking the cost of the component.

1 19. The method as recited in claim 17, further comprising:
2 determining a supplier absorption cost;
3 adding the material cost, the cost of labor to assemble a component, the cost of
4 labor to test a component, the profit, the overhead cost, the freight cost,
5 the warranty cost and the supplier absorption cost; and
6 benchmarking the cost of the component.

1 20. The method as recited in claim 17, further comprising:
2 determining a miscellaneous cost;

3 adding the material cost, the cost of labor to assemble the component, the cost
4 of labor to test the component, the overhead cost, the freight cost, the
5 warranty cost and the miscellaneous cost; and
6 benchmarking the cost of the component.

1 21. A method for determining a best bill of materials, comprising:
2 determining a benchmark cost for the bill of materials supplied by a supplier;
3 determining a class of suppliers, the class of suppliers supplying equivalent
4 bills of materials to a manufacturer; and
5 determining a supplier within a class of suppliers, the supplier providing a
6 lowest cost bill of materials to the manufacturer.

1 22. A method for manufacturing a computer system, comprising:
2 determining a best bill of materials; and
3 assembling the computer system with a component, the component determined
4 by the best bill of materials.

1 23. A method of designing a computer system, comprising:
2 determining a benchmark cost of a component; and
3 determining a best costed bill of materials for a computer system.

1 24. A method of assembling a computer system, comprising:
2 assembling a set of components, wherein a component included in the set of
3 components is selected by determining a best costed bill of materials,
4 wherein the best costed bill of materials is determined by a benchmark
5 cost of the component selected.

1 25. A system for managing purchasing information, comprising:
2 a computer system, the computer system including a processor, a memory and
3 a database, the database comprising:
4 an identifier of a component; and

5 a part number of the component, the part number assigned to the
6 component by a manufacturer.

1 26. The system as recited in claim 25, the database further comprising:
2 a country of origin of the component.

1 27. The system as recited in claim 26, the database also including an
2 indicia of geopolitical risk of the country of origin.

1 28. The system as recited in claim 25, the database further comprising:
2 the identity of a supplier of the component, the identity of the supplier
3 including a location of the supplier.

1 29. The system as recited in claim 25, the database further comprising:
2 a name of a foundry of the component.

1 30. The system as recited in claim 25, the database further comprising:
2 a vendor of the component.

1 31. The system as recited in claim 25, the database further comprising:
2 an end-of-life date for the component.

1 32. The system as recited in claim 25, further comprising:
2 a set of sub-components.

1 33. A system for managing purchasing information, the system on a
2 computer system, the computer system including a processor and a memory, the
3 system comprising:
4 a non-volatile computer readable memory, the non-volatile computer readable
5 memory including:
6 instructions to determine a benchmark cost of material.

1 34. The system as recited in claim 33, the non-volatile computer readable
2 memory also including:
3 instructions to determine a best bill of materials.

1 35. A method of forecasting materials requirements, comprising:
2 storing on a non-volatile computer readable media a set of components for an
3 assembled product;
4 storing on a non-volatile computer readable media set of sub-components for
5 the set of components;
6 combining the set of components and the set of sub-components;
7 storing on a non-volatile computer readable media the combined set of
8 components and sub-components;
9 determining from suppliers the quantity of components available during a
10 specified time period;
11 developing a production plan, the production plan estimating the quantity of
12 items by be manufactured within a specified time period; and
13 comparing the quantity of material projected by the production plan to the
14 quantity of components available from suppliers.

1 36. A method of organizing a bill of materials, comprising:
2 determining an attribute of component;
3 determining a sub-attribute grouping of the component;
4 determining a sub-attribute of the attribute, the sub-attribute associated with
5 the group; and
6 storing in a database the attribute and sub-attribute of the component.

1 37. A method of comparing components, comprising:
2 determining an attributes of a first component;
3 storing in a database the attribute of the first component;
4 determining an attributes of a second component;
5 storing in a database the attribute of the second component;

6 comparing electronically the attribute of first component to the attribute of the
7 second component; and
8 identifying the second component not equivalent to the first component if the
9 attributes do not match.

1 38. The method of identifying a substitute component, comprising:
2 determining an attributes of a first component;
3 storing in a database the attribute of the first component;
4 determining an attributes of a second component;
5 storing in a database the attribute of the second component;
6 comparing electronically the attribute of first component to the attribute of the
7 second component; and
8 identifying the second component a substitute for the first component if the
9 attributes match.

1 39. A computer program product encoded on computer readable media, the
2 computer program product comprising:
3 instructions, executable on a computer system, configured to store a bill of
4 materials, the bill of materials comprising:
5 a first component, the first component having an attribute;
6 and
7 a second component, the second component having an attribute.

1 40. The system as recited in claim 39, further comprising:
2 instructions configured to compare the attribute of the first component with
3 the attribute of the second component.

1 41. The system as recited in claim 39, wherein the attribute of the first
2 component is an end-of-life date of the first component.

1 42. The system as recited in claim 39, wherein the attribute of the first
2 component is a part number, the part number assigned by a manufacturer.

1 43. The system as recited in claim 39, wherein the attribute of the first
2 component is a country of origin of the first component.

1 44. The system as recited in claim 39, wherein the attribute of the first
2 component is an indicia of risk of the county of origin of the first component.

1 45. The system as recited in claim 39, wherein the attribute of the first
2 component is a location of a foundry of the first component.

1 46. The system as recited in claim 39, wherein the attribute of the first
2 component is a vendor of the first component.